

# A Viable Solution: The Case for Blended Delivery on an On-line Learning Programme

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## ABSTRACT

The development of e-learning presents challenges for providers in terms of their need to re-engineer themselves to cater for the different demands of this educational frontier. This study profiles the BA Enterprise programme, designed by the University of Glamorgan and analyses the emergence of the blended pedagogical learning model that has evolved within this programme utilising a case study methodology. The course was conceived as an exclusively on-line programme but evolved into a hybrid-blended pedagogy. A framework for blended delivery is proposed alongside an identification of the key factors for the effective delivery of an on-line course. This study contributes to knowledge by identification of the critical issues behind the development of a blended e-learning programme.

## Keywords

Blended, e-learning, framework, pedagogy, case study

## INTRODUCTION

The development of e-learning has provided significant challenges for universities and the private sector in terms of re-engineering themselves to deal with the different demands of this emergent educational frontier (Katz & Oblinger, 2000). Conventional university institutional pedagogical models have had to be reconstructed to cater for the unique demands of e-learning (Sims, Powell, & Vidgen, 2002). This study profiles the pedagogical development of the on-line BA Enterprise programme, part of the Objective 1 funded E-College Wales (ECW) initiative designed by the University of Glamorgan. The study will consider existing literature and the practice of blended learning and thereafter critique the development of the ECW model. The paper concludes by identifying critical practice for blended e-learning methodologies.

## E-COLLEGE WALES

In 2001, the University of Glamorgan initiated the ECW project aimed at creating and improving entrepreneurial and managerial capacity in the European Union Objective One areas of Wales, where such activity has been deficient. ECW comprises three programmes including the BA Enterprise, Foundation degree and MA in Professional development, which are supported by the University of Glamorgan and partner colleges throughout Wales. This study will focus on the BA Enterprise, which was written and developed purely as an e-learning programme for the project. The other programmes (MA in Professional Development and Foundation degree) existed prior to the ECW development as distance learning courses. The course was piloted in September 2001, with over 370 students and is available as a part time or full time degree in three component qualifications of certificate, degree and full honours degree with each award comprising 6 modules

## METHODOLOGY

The case study methodology deployed a series of focus groups with scheme leaders, e-moderators and student groups and a historical recount of the development of the project. A research instrument in the form of a semi-structured questionnaire was designed to elicit responses from all parties to provide a multi-faceted analysis regarding what factors contributed to the development of the final pedagogical model. Three main issues were identified within the research instrument. Firstly, respondents were asked to justify the need for a blended pedagogy and the benefits that it provided. Furthermore, respondents were asked to consider how the blended pedagogy had emerged and describe its components. Focus groups were held in the University of Glamorgan and five partner colleges (Bridgend, Sir Gâr, Gwent, Llandrillo and Pembroke) with both a student group and e-moderating team. The student focus groups comprised of 6 students and the e-moderators between 4-6 participants. Finally the scheme leaders were interviewed to address any University and programme related issues behind the development of the pedagogical model. The results of the focus groups were then evaluated and contrasted to identify key trends and issues.

## LITERATURE

The term blended learning is used to describe a learning solution that combines several delivery methods. Singh and Reed (2001) define blended e-learning as a learning experience that combines off-line and on-line forms of learning whereby on-line learning means “over the Internet” and offline learning occurs in a traditional classroom setting. Williams (2003) has identified that blended training is growing in popularity with the shift from traditional teaching to e-learning. However, Singh and Reed (2001) state that little formal research exists on how to construct the most effective blended learning programme whilst Williams (2003) recognises that it is a major challenge to finding the right balance of integrating the various delivery mechanisms into a seamless package. The incentive to offer blended e-learning derives from the desire to offer the most effective elements from both traditional classroom based delivery and the e-learning medium. The benefits of both mediums are well recorded in the literature. The benefits of e-learning to the individual have been identified as: -

- cost savings in terms of trainer costs and employee costs (Williams, 2003; Voci & Young, 2001; Van Dam, 2001)
- provides an alternative to traveling to centre of learning and lower costs for learner (Pikurich, 2004)
- flexibility with the learner able to learn at any time or place including remote areas (Frank, Kurtz & Levin, 2002 & Pikurich, 2004).
- respects differences in learning style and pace (McVay-Lynch, 2002 & Pikurich, 2004)
- consistent learning material compared to human interaction. (Voci & Young, 2001)
- Course content in one accessible location for learners and e-moderators (McVay-Lynch, 2002)
- can foster a greater degree of communication and closeness among students and e-moderators (Joliffe, Ritter & Stevens, 2001)
- The learning materials are easy to update (Joliffe, Ritter & Stevens, 2001)

By contrast the advantages of the traditional classroom as identified by Voci and Young (2001) include: -

- providing the social interaction that human beings need and enjoy by the direct exchange of ideas.
- a familiar and comfortable method that learners are used to from their previous education experiences.
- creates an interactive learning environment in which learners can test their own attitudes, choices and reaction against peer and their tutor.

Obviously both mediums have inherent disadvantages that must be avoided and can be overcome with effective blended learning. As noted by Van Dam (2001) e-learning solutions cannot currently duplicate all the features of traditional teaching. The critical factor therefore is that they supplement each other's strengths and meet the needs of the student group.

Blended e-learning offers several key facets as identified by (Van Dam, 2001): -

- Team building – allows group relationships to develop and a shared sense of purpose
- Interaction with tutors – feedback and individual coaching from a tutor on a one to one basis can specifically develop knowledge and overcome any problems or barriers and clarify any issues.
- Networked learning – allows the group to exchange and develop ideas freely
- Improved consistency of teaching and training, as it is not subject to variability of performance in terms of mood, health of the traditional tutor etc.
- Offers considerable flexibility and time savings because students can choose where and when to study
- Reinforces new knowledge, builds confidence and allay fears (Smith, 2001).

There is an emergent body of evidence supporting successful blended e-learning. Dean, Stahl, Sylwester and Peat (2001) identified cost and time savings and a 10% improvement in learning outcomes in their study of MBA students. Kiser (2002) reported on a 2-year study by Thomson Learning of 128 respondents investigating the effectiveness of blended learning in comparison with a pure online course based on the teaching of Microsoft Excel. The study found that a blended e-learning group performed their tasks with 30 percent more accuracy than the online group and 41% faster. The Thompson Learning study identified 5 core elements contributing to the success of a blended e-learning programme namely: -

- Use of scenario based exercises to teach a subject
- Integration of learning objects with realistic scenarios
- Early use of the knowledge or skills

- Access to live mentors during the online portion of the training
- Assessments designed to mimic real world tasks

Thus the evidence suggests that blended e-learning works, however what conclusions can be drawn on successful implementation. Pailing (2002) identifies that e-learning is best used as a complement to traditional methods of training and should not be viewed as a replacement. Trasler (2002) identified that it was the overriding aim of a blended e-learning programme to meet the training requirements of both the individual learner and providing enterprise with the appropriate mixture of learning media. Rabideau (2003) identifies that blended e-learning is a transition strategy that has developed with the emergence of e-learning to supplement and even replace classroom based teaching. He identifies that the need for blended learning will evolve as the technological design of virtual learning environments (VLEs) matures and design, development and delivery methods improve.

In terms of good practice for blended learning Frank, Kurtz and Levin (2002) recommend that the tutor meet face-to-face with the students at the beginning, middle and end of the course. Whilst Khine and Lourdasamy (2003) suggest ensuring face-to-face tutorials are activity based, any materials on CD ROM are authentic and relevant and course marks are allocated to encourage online participation. Other successful practices identified within the blended learning case studies included making the learner the central focus of the course, that there is a continual process of development and feedback, and flexibility, variety and adaptability are present in the structure of the programme.

In summary, the literature on blended elearning remains limited with reference to mainly private sector experiences of largely descriptive case studies in professional journals. However, the experiences are without exception positive and have resulted in the achievement of higher learning outcomes and reduced costs in comparison with traditionally taught programmes. However, there is a lack of evidence related to the university sector in terms of their experience with blended e-learning. This study bridges this gap and presents a conceptual framework for modeling the blended e-learning process effectively.

## FINDINGS

This section will consider the move towards blended e-learning on the BA Enterprise based on the analysis of the focus groups undertaken with e-moderators, students and scheme leaders. Thereafter the blended e-learning model is discussed utilising the conceptual framework.

### E-moderators and Scheme Leaders Focus Groups

The e-moderator focus groups were asked to justify the need for a blended pedagogy and the benefits that it provided. The e-moderators identified that a blended pedagogy was required due to a combination of factors. Firstly, to meet the needs of the Enterprise students as they were non-traditional learners. Analysis of the group demographics revealed that the typical student was over the age of forty with basic IT skills. The consensus opinion of the e-moderating team was that the students required initial face-to-face training in basic IT skills (e.g. file management, surfing the Internet) as well as specific sessions in navigating and utilising the virtual learning environment (VLE) effectively. Furthermore, they also required ongoing support in each module to explain the theory and concepts as well as the assessment requirements. This support took the form of a number of face-to-face sessions with a student group as it was felt that the on-line learning in isolation was not sufficient for this student group. In addition support sessions were provided with individual students to develop IT skills and develop subject knowledge where required. Statements included: -

*“It becomes apparent fairly quickly that the majority of the students were struggling to cope. In all honesty the majority of these people had not had any formal education for twenty years and just being a student was going to be a difficult task let alone on an online learning student”*

*“There are a lot of things to take in with e-learning including the hardware, the software (Blackboard), the course design, the University and partner colleges and all their preconceptions, budgets and timetables, the student and whatever baggage they bring and the e-moderators. All of these elements have to integrate and interact effectively for the course to be a positive and worthwhile experience”.*

In terms of **how** and **why** did the blended elearning module emerge the e-moderating team felt that it was a combination of factors, initially the VLE was unreliable causing confusion and anxiety, and the face-to-face sessions were required to reassure. Secondly, students constantly requested face-to-face sessions to provide additional training and support. Thirdly, the e-moderators identified that initially they felt more comfortable in their traditional teaching role in a face-to-face situation rather than the on-line environment. In terms of

benefits e-moderators noted that blended e-learning allowed the students to meet, develop relationships and a community spirit. Most importantly they felt it improved student results, satisfaction and retention. In addition, the scheme leaders recognised the need for support bodies to provide technical and academic support and initiated the introduction of a customer service team to assist students, and take some of the pressure off the e-moderating team in terms of providing technical advice and problem solving.

*"I think we all came to the same conclusions. The students needed extra support and we provided it via face-to-face sessions. As we know this became course policy thereafter"*

*"I would say Blended learning has been a great success. Its allows us to inform the students, dispel fears and the students get to bond and create relationships"*

### **Student focus group**

The student focus groups mirror the comments of the e-moderators. The students requested and welcomed the face-to-face sessions to supplement the on-line provision. They identified that it made the course more achievable and understandable. Another comment suggested that students welcomed the opportunity to meet fellow students and staff to socialize. In terms of HOW and WHY the face-to-face element occurred the students felt it simply met their needs and allowed them to learn more effectively. Comments included: -

*"the initial Blackboard face-to-face training were essential for us to find our way around the system and know what to do"*

*"We vote with our feet, if we did not want the face to face sessions we would not attend. We did and we still do"!*

### **ECW Blended Learning Strategy**

As a result of the feedback from student and e-moderator experience a blended learning strategy emerged (see Figure 1) which involved a combination of on-line activity and face-to-face support from a variety of bodies. Figure 1 provided a diagrammatical description of this model.

### **Face-to-Face Provision**

Currently face-to-face provision involves the students attending a three-day induction to be accepted onto the programme and thereafter they have the option to attend a series of Saturday schools and evening sessions for support in specific modules. In addition, students could arrange one to one sessions with e-moderators for individual support sessions. It must be noted that the course can still be completed as a pure elearning course if the student so chooses although only a small minority of students have adopted this route.

### **The Virtual Learning Environment**

The course is supported by 'Blackboard' software and utilises a range of synchronous and asynchronous communication mechanisms including discussion boards, e-mail and virtual classrooms. Course materials are linked to 'Blackboard' via a virtual learning environment (VLE) supporting text-based learning material and case studies utilising graphical and audio techniques. The students are expected to participate regularly within the discussion boards and other communication media to develop their subject knowledge and share experiences.

### **Support Systems**

In addition to the pedagogical design issues the ECW team identified the necessity for a range of support mechanisms to assist the on-line learner. These incorporated internal course monitoring mechanisms and external on-line support systems. Internal mechanisms included monitoring and encouraging student activity within individual learning groups, which were initially maintained by an academic on-line tutor and thereafter by a Quality Assurance (QA) team. External systems included the Information Systems and e-learning Services (ISELS) department, whose role was to support the technical needs of the e-learning student and the Learning Resources Centre (LRC) section, which maintained and provided access to electronic and physical information sources for students and staff. The role of these bodies and systems is fully explained and illustrated within the blended delivery framework.

### **The Role of the E-moderator**

The e-moderator acts as a facilitator to guide the student through the learning experience. The emoderator is expected to encourage on-line activity by aiding students through weekly learning tasks and monitoring and guiding these discussions. Typical online tasks include identifying activities on a weekly basis, responding to communications, summarising on-line discussions and grading assessments. Face-to-face activities include hosting group and individual sessions, holding inductions and counseling students.

### **CONCLUSIONS**

Initially the BA Enterprise course was conceived as an exclusively on-line programme but evolved due to the nature of the student group into a hybrid-blended pedagogy. The prime motivation for this hybrid delivery was the necessity to meet the needs of the student group who could be characterised as a mature adult learner community with low IT skills and little previous experience of Higher Education. Students were not on campus and worked predominantly from home and had to fit the course around their personal and working lives.

The blended e-learning model that emerged can be seen in Figure 1. It was comprised of a largely on-line environment supported by a structured programme of traditional face-to-face teaching. In addition to the e-moderating team, a number of support teams were created to assist the students and on-line tutors. For example, the ISELS customer service team were created to problem solve and trouble shoot for the students and e-moderators. They could be contacted via telephone or e-mail and were available on a day, evening and weekend basis. They could also liaise with the VLE development team to communicate any inconsistencies or problems with the course material. It is critical that such a body exists to ensure communication is a two way process and any issues with the VLE or individual students are quickly identified and resolved.

The ECW model of blended e-learning supports the findings of the existing literature. An appropriate range and mix of activities has been developed and resourced and the face-to-face element compliments and supplements the on-line activity. The face-to-face support is structured to provide initial and ongoing support as deemed necessary by the individual e-moderator. In terms of critical practice the authors would recommend:

- An initial face-to-face induction to familiarise students with the VLE and course requirements. Also, to create a group and community spirit. The students should leave this experience confident and competent to operate within the online environment.
- Communication is essential. Ensure students are aware of lines of communication to solve technical issues and answer queries.
- A structured set of events per module, for which the student is aware and given notice.
- Provide help desk facilities to support e-moderators and students and act as a link with the VLE development team.

In some ways the blended learning pedagogy can be seen as a development strategy. As emoderators become more familiar with the learning environment and technology develops there should be less requirement for blended delivery. For example, if there is increased development in the synchronous communication mechanisms available in VLEs these would lessen the necessity for face-to-face provision. However, in the mean time it is critical that on-line learning courses develop working and effective blended learning strategies that support the student through the forthcoming experience. However, to strike a note of caution, in the author's opinions it must be noted that there cannot be a generic model for blended elearning as there are far too many variables. The ECW BA Enterprise model is specific to the programme and meets the requirements of the learning group and the VLE. If a provider is in the process of developing their strategy it is dependant on the proposed pedagogy and learning needs of their student cohort.

In summary, this paper presents the critical issues in building a workable and manageable blended e-learning pedagogy for an emerging on-line programme. This contributes significantly to the limited literature in this field and could be utilised as a practical guide in the effective management of pedagogical issues associated with on-line learning.

### **REFERENCES**

Dean, P., Stahl, M., Sylwester, J. & Peat, J. (2001). Effectiveness of Combined Delivery Modalities for Distance learning and Resident Learning, Quarterly Review of Distance Learning, July/August.

- Frank, M., Kurtz, G., Levin, N. (2002). Implications of Presenting Pre-University courses Using the Blended e-learning approach, *Educational Technology & Society*, 5 (4), pp 1-16
- Joliffe, A., Ritter, J. & Stevens, D. (2001) *The Online Learning Handbook – Developing and Using Web-Based Learning*, Kogan Page, London.
- Katz, R. & Oblinger, D. (2000). *The ‘E’ is for Everything: E-commerce, E-business and Elearning in the Future of Higher Education*, Jossey-Bass Inc., San Francisco.
- Khine, M. & Lourdasamy, A. (2003) Blended Learning approach in teacher education: combining face to face instruction, multimedia viewing and online discussion.
- Kiser, K. (2002). Is Blended Best?, *e-learning*, June, p10.
- Long, H. (2004). E-learning An Introduction, Chapter 2, pp7-23 in Piskurich, G. (2004). *Getting the Most from Online Learning*, Pfeiffer, San Francisco.
- McVay-Lynch, M. (2002). *The Online Educator – A Guide to Creating the Virtual Classroom*, RoutledgeFalmer, London.
- Pailing, M. (2002). E-Learning: is it really the best thing since sliced bread? *Industrial & commercial Training*, Vol 34, num 4, pp 151-155.
- Rabideau, R. (2003). Preparation for e-learning – A view from a Corporate Learning Leader, Chapter 5, pp 73-90 in *Preparing Learners for e-Learning*, Piskurich, G (eds), Jossey-Bass/Pfeiffer, San Francisco.
- Sims, J., Powell, P. & Vidgen, R. (2002). 2+2=3? Elearning Strategies in HE, UKAIS conference, Leeds, 10-12 April, pp122-131.
- Singh, H. & Reed, C. (2001). *Achieving Success with Blended Learning*, White Paper, Centra Software.
- Smith, J. (2001). Blended Learning – An Old friend gets a new name, *Executive Update Online – Special; section – Blended Learning*, March. Available: [www.gwsae.org/executiveupdate/2001/March/blended.htm](http://www.gwsae.org/executiveupdate/2001/March/blended.htm)
- Trasler, J. (2002). Effective learning depends on the blend. *Industrial and Commercial Training*, Volume 34, Number 5, pp 191-193.
- Van Dam, N. (2001). Where is the Future of Learning? Blended learning is the ultimate answer, *e-learning*, November, pp 160.
- Voci, E. & Young, K. (2001). Blended Learning working in a leadership development programme, *Industrial & Commercial Training*, Volume 33, Number 5, pp 157-160.
- Williams, S. (2003). Clerical Medical feeds back on blended learning. *Industrial and Commercial Training*, Volume 35, Number 1, pp 22-25.

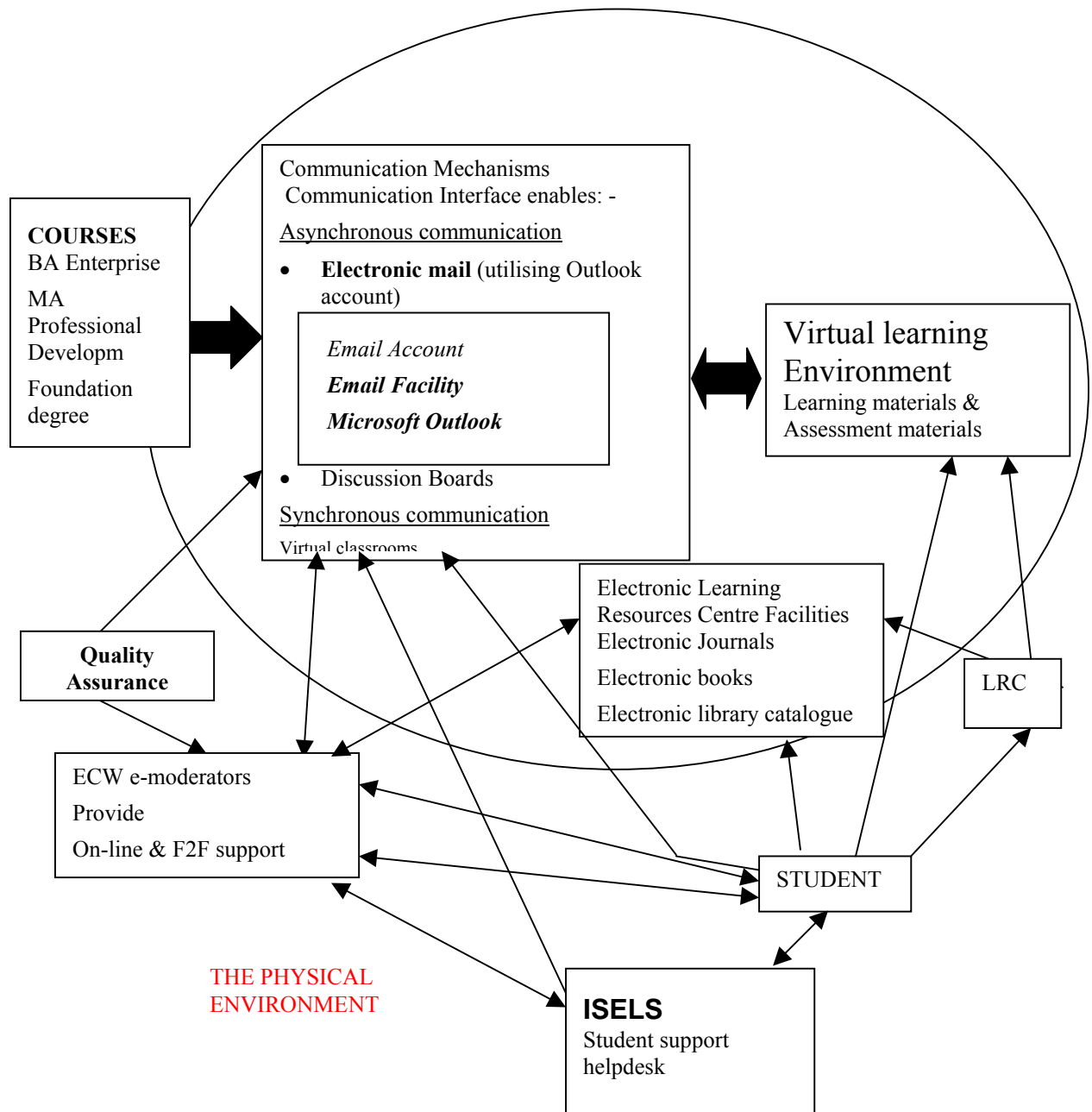


Figure 1: ECW BA Enterprise Blended Learning Environment